

CLAIMS

1. The use of an organosilyl ester of a carboxylic, sulphonic or phosphoric acid as an alkaline hydrolysis or erodability booster for the binder system of a paint formulation.
2. The use according to claim 1, wherein more than one silylester of a carboxylic, sulphonic or phosphoric acid are used in any such paint formulation ie. a mixture of such silylesters are utilised as boosters.
3. The use according to claim 1 or 2, wherein the carboxylic, sulphonic or phosphoric acid part of the organosilylester has a non-vinyl alpha carbon.
4. The use according to any of claims 1-3, wherein the binder system comprises a film forming binder.
5. The use according to any preceding claim, wherein the organosilylester of the invention is also independently film forming.
6. A film forming or resinous binder for a paint composition comprising organosilylesters of carboxylic, sulphonic or phosphoric acid, said acid having a non-vinyl alpha carbon and being other than rosin.
7. The use of organosilylesters of monocarboxylic, sulphonic or phosphoric acids, said acids having a non-vinyl alpha carbon and being other than rosin as a binder component of a paint binder system.
8. A paint composition comprising organosilylesters of monocarboxylic, sulphonic or phosphoric acids, said acids having a non-vinyl alpha carbon and being other than rosin.
9. A paint according to claim 8, wherein the paint comprises a binder system, the said binder system comprising the said organosilylesters of monocarboxylic, sulphonic or phosphoric as a binder component.
10. A paint composition comprising silylesters of monocarboxylic, sulphonic or phosphoric acid other than rosin as a binder component of the binder system.

$R^{10}ZOH$ (V)

- from the system to produce at least one protected acid group of said formula (I).
17. A use, process, binder or paint composition according to claim 15 or 16, wherein when an acylated silyl ester is represented by formula I it has more than one acyloxy group attached to one or several silicon atoms.
18. A use, process, binder or paint composition according to any of claims 15-17, wherein the carboxyl radical part of formula (IV) is selected from formyl, acetyl, propionyl and butyryl.
19. A use, process, binder or paint composition according to any of claims 15-18, wherein the carboxyl radical part of formula R^7ZOH independently includes propionyl, butyryl, pivaloyl, oxaloyl, malonyl, succinyl, glutaryl, adipoyl, benzoyl, phthaloyl, isobutyryl, sec-butyryl, octanoyl, isooctanoyl, nonanoyl, isononanoyl, abietyl, dehydroabietyl, dihydroabietyl, naphthenyl, anthracenyl, abietyl dimer (Dymerex®), fully hydrogenated dihydroabietyl (Foral®) and the like and polymers or copolymers thereof.
20. A use, process, binder or paint composition according to any of claims 16-19, wherein the organosilylated carboxylate compounds of general formula (III) include trimethylsilylformiate, dimethylsilyldiformiate, methylsilyltriformiate, tri-n-butyl 1-acetoxy-silane, di-n-butyl 1,1-diacetoxy-silane, n-butyl 1,1,1-triacetoxy-silane, tri-n-propyl-1-acetoxy silane, di-n-propyl 1,1-diacetoxy-silane, n-propyl 1,1,1-triacetoxy-silane, tri-t-butyl-1-acetoxy-silane, tri-isopropyl-1-acetoxy-silane, tri-isobutyl-1-acetoxy-silane, tri-methyl-1-acetoxy-silane, di-methyl 1,1-diacetoxy-silane, methyl 1,1,1-triacetoxy-silane, triethyl-1-acetoxy-silane, diethyl-1,1-diacetoxy-silane, ethyl 1,1,1-triacetoxy-silane, vinyl 1,1,1-triacetoxy-silane, tribenzyl-1-acetoxy-silane, triamyl-1-acetoxy-silane, triphenyl-1-acetoxy-silane, trimethylsilylpropionate, t-butyl dimethylsilylacetate, pentamethyl-1-acetoxy-disiloxane, heptamethyl-1-acetoxy-trisiloxane, nonamethyl-1-

such as naphthenic acid; and C4 – C60 acids (including aromatic or unsaturated acids) such as hydrogenated rosin.

23. A use, process, binder or paint composition according to any preceding claim, wherein the co-binders which may be used in combination with the silylesters as defined may be selected from :

- Resinates of Ca, Cu or Zn
 - Naphthenates of Ca, Cu, Zn
 - Vinyls like Laroflex MP (commercially available from BASF)
 - Acrylates like Neocryl B725 (commercially available from Avecia)
- Cu/Zn/Ca acrylates, e.g. as described in EP 342276; EP 982324 (Kansai) or polyesters e.g. as described in EP 1033392 (Kansai); Tri-organosilyl(meth)acrylates copolymers as described e.g. in EP 131628 (M&T); US 4593055 (M&T); EP 775773 (Chugoku); EP 646630 (NOF); US 5436284 (NOF); WO 0162811 and WO 0162858 (SIGMA COATINGS);
- Hydrophilic (meth) acrylates such as e.g. described in FR 2 557 585 (Jotun), EP 526441 and EP 289441 (SIGMA COATINGS).

24. A use, process, binder or paint composition according to claim 23, wherein the co-binders which may be used in combination with the silylesters as defined are selected from tri organo silyl(meth) acrylate copolymers.

25. A use, process, binder or paint composition according to claim 24, wherein the binders incorporate poly(silylesters) or polyfunctional acids such as abietyl dimers to help improve the film forming properties of the binder.